UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/540,440	THEIMER ET AL.
	Examiner	Art Unit	
	SON T. HOANG	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>19 December 2008</u>.
2a) ☐ This action is FINAL.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-5,9,10,12-19,21-32,35 and 37-39</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-5,9,10,12-19,21-32,35 and 37-39</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on <u>20 June 2005</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

December 19, 2008 has been entered.

Response to Amendment

2.   Claims 6-8, 11, 20, 33-34, and 36 are canceled.

Claims 1, 9-10, 12, 18, 32, 35, and 37-39 are amended.

Claims 1-5, 9-10, 12-19, 21-32, 35, and 37-39 are pending.

Response to Arguments

3.   Applicant's arguments with respect to the claims have been considered but are

moot in view of the new ground of rejections presented hereon.

Claim Objections

4.   Claim 35 is objected to because of the following informalities: having a typo in

limitation "*a storage component for a storing said user ...*" on line 26. Appropriate

correction is required.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
set forth the best mode contemplated by the inventor of carrying out his invention.

6.   Claims 18-19, 21-26, 32, and 38 are rejected under 35 U.S.C. 112, first

paragraph, as failing to comply with the written description requirement. The claim(s)

contains subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the

application was filed, had possession of the claimed invention.

Regarding independent claims 18, and 38, at least the limitation of "*mapping*

said set of code bases into at least one further frequency range out of said plurality of

frequency ranges" in each claim is not supported by Applicant's disclosure.

Claims 19, 21-26, and 32 are rejected based on their dependencies on claim 18.

7.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

8.   Claims 18-19, 21-26, 32, and 38 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

Regarding independent claims 18, and 38, at least the limitation of "*mapping*

said set of code bases into at least one further frequency range out of said plurality of

frequency ranges" in each claim is not supported by Applicant's disclosure.

Claims 19, 21-26, and 32 are rejected based on their dependencies on claim 18.

Notes

9.   With respect to independent claims 35, and 38-39, under 35 U.S.C. 101, each

claim recites a "*storage component*" and this component is taken in view of the instant

specification on Page 21 ([Paragraph 0034, Lines 4-18]) to be inclusive of statutory

embodiment such as hardware physical storage devices. Therefore, claims 35, and 38-

39 are statutory under 35 U.S.C. 101.

Dependent claim 37 is also statutory under 35 U.S.C. 101 for the same reasons

above.

Claim Rejections - 35 USC § 102

10.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

11.   Claim 39 is rejected under 35 U.S.C. 102(e) as being anticipated by Andrews et

al. (*Pub. No. US 2003/0060979, filed on September 21, 2001; hereinafter Andrews*).

Regarding claim 39, Andrews clearly shows and discloses storage device

(*Figure 3*), comprising:

a interface component (*wireless network interface 314, input/output interface 316

in Figure 3*) for receiving a request for storing from a mobile terminal device , for

receiving a request for retrieving from said mobile terminal device, and for transmitting a

response to said mobile terminal device in response to said request for retrieving,

wherein said request for storing comprises a part of user provided information and

reference information to be stored (*the wireless network interface 314 enables the*

position detector to receive information for the determination of the location of the

wireless device 102. The input/output interface 316 comprises controllers used to

couple the processor 302 to the input device 322 and the output device 324. Namely,

the input/output interface 316 enables the transmission of information containing voice,

text and video between the processor 302, the input device 322 and the output device

324, [0039]);

wherein said request for retrieving is a request for retrieving at least said part of

said user provided information from said mobile terminal device (*the wireless device*

may execute a client program, such as a map program, to allow the user to locate the

appointment location. Coordinates for the appointment location can then retrieved from

a database, which may be resident on the client device or on a remote machine,

[0022]);

a storage component for storing said part of said user provided information and

said referencing information such that said part of said user provided information is

retrievable in conjunction with said referencing information (*The memory 304 stores the*

necessary data and programming structures necessary for the operation of the wireless

device 102. Illustratively, the memory 304 stores the operating system 310, the travel

prediction program 312, the appointment data structure 313 and the history data

structure 315. Additionally, the memory 304 may store other application programs (not

shown). The memory 304 may comprise a combination of memory devices including

random access memory (RAM), nonvolatile or backup memory (e.g., programmable or

flash memories, read only memories (ROM), [0036]);

a component for retrieving said part of said user provided information being

requested with said request for retrieving in accordance with said referencing

information, for generating said response including said retrieved part of said user

provided information (*The processor 302 performs instructions based upon the*

requirements of an operating system 310, a travel prediction program 312, an

appointment data structure 313 and a history data structure 315 stored in the memory

304. The processor 302 executes the travel prediction program 312 to implement the

embodiments of the present invention. In one embodiment, the processor 302

determines a projected alarm time for an appointment and notifies the user of the

appointment when the projected alarm time is reached or exceeded, [0035]).

Claim Rejections - 35 USC § 103

12.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

13.   Claims 1-5, 9, 12-13, 17, 27-31, 35, and 37 are rejected under 35 U.S.C. 103(a)

as being unpatentable <u>Andrews et al.</u> (*Pub. No. US 2003/0060979, filed on September*

21, 2001; hereinafter Andrews) in view of Brechner et al. (*Pat. No. US 6,741,996, filed*

on April 18, 2001; hereinafter Brechner).

Regarding claim 1, Andrews clearly shows and discloses a method ([Abstract])

comprising:

obtaining user provided information in consequence to any user operation on a

mobile terminal device (*A user of the wireless device 102 schedules an appointment at*

a site located inside the building 104 at some time in the future. The user then enters

the appointment location, e.g., the location of the building 104, and the appointment

time into the wireless device 102, [0022]);

obtaining context information associated with said user provided information,

wherein said context information is related to at least one current condition of the mobile

terminal device at the time of said any user operation and includes calendar information

from an electronic calendar implemented at said mobile terminal device (*the current*

location of the user is obtained from a position detector, e.g., a global positioning

system (GPS), in the wireless device 102 or a device coupled to the wireless device

102. Using the current location, the appointment location and the path 106, and an

estimated travel time can be calculated, [0023]);

obtaining a first time information in accordance with said user provided

information (*the method 400 starts at step 402 and proceeds to step 404 where a*

current time is retrieved from the support circuits 318, e.g., a clock, and the current

location of the wireless device 102 is retrieved from the position detector 306. At step

406, the method 400 processes each appointment stored in the memory 304 of the wireless device 304, [0048]);

obtaining one or more calendar entries includes in said calendar information, wherein each calendar entry comprises a second time information with a start time and an end time (*data collection table 315C is a table organized as a series of columns and rows. Each row defines a record for a particular appointment. The columns include an appointment column 502A, an alarm lead time column 502B, a calendar event column 502C, a GPS departure location column 502D, a GPS arrival location 502E, an arrival time column 502F and a stress factor column 502G. Each entry under the appointment column 502A contains an appointment number by which the particular appointment for that record can be identified*, [0042]);

matching said first time information and each of said second time information by assigning a membership function to said second time information, wherein said membership function is a function in time, which rises from zero value at a predetermined moment in time before said start time of each calendar entry, and becomes zero value at a predefined moment in time after said end time of each calendar entry (*the wireless device 102 is configured to notify the user of the appointment. To perform this notification, the wireless device 102 determines or projects an "alarm time". The projected alarm time is a prediction of when the user of the wireless device 102 needs to start preparing for the appointment in order to timely arrive for the appointment using a common form of transportation, e.g., an automobile, a plane, a train, a bus, and the like. The notification is provided if the projected start time*

is reached or exceeded, i.e., when the current time reaches or exceeds the projected

alarm time, [0024]. The reminder alarm is a preset alarm that reminds the user of the

appointment. Different formats of the reminder alarm exist. For example, the reminder

alarm may comprise a one-time alarm or a periodic alarm, [0056]), and

deriving a membership grade value from said membership function in

accordance with said first time information, and said membership grade value defining a

measure which allows to estimate a reliability for retrieval (*The particular appointment is*

identified in the appointment column 602A. The entries of the lead time column 602B

are populated using the alarm lead time column 502B of the history data structure 315.

Each entry of a projected lead time column 602C provides a lead time to be used for the

next appointment. The projected lead time is calculated using a time difference value

contained in the entries of a time difference column 602D, [0044]); and

obtaining meta-information from each matching calendar entry of said one or

more obtained calendar entries.(*Once the alarm time is reached, processing continues*

to step 908 where the current GPS location and the appropriate calendar information

(i.e., the user's current activity based on a calendar entry) are extracted, [0058]);

assigning meta-information obtained from said context information and said

membership grade value to said user provided information (*the data collection table*

315C is a table organized as a series of columns and rows. Each row defines a record

for a particular appointment. The columns include an appointment column 502A, an

alarm lead time column 502B, a calendar event column 502C, a GPS departure location

column 502D, a GPS arrival location 502E, an arrival time column 502F and a stress

factor column 502G. Each entry under the appointment column 502A contains an

appointment number by which the particular appointment for that record can be

identified, [0042]);

storing said user provided information and said meta-information in a history

storage in order to establish an information history functionality (*Referring now to Figure*

7, a summary view 315B of the history data is shown. In this view, the history data

contained in the history data structure 315 has been sorted into two columns 702 and

704. Lead times and current GPS locations are contained in the history data structure

among with other attributes, [0047]).

Brechner discloses:

wherein said meta-information is employable for retrieval of said user provided

information by matching request information of a retrieval request with said meta-

information for selecting a user provided information assigned to said meta-information

matched to said request information (*the user could also specifically identify digital*

photographs relating to beach scenes by searching for metadata that include the word

"beach" within the meta data associated with each of the files included within the

collection hierarchy stored in the user's content database, [Column 11, Lines 11-23]).

It would have been obvious to an ordinary person skilled in the art at the time of

the invention was made to incorporate the teachings of Brechner with the teachings of

Andrews for the purpose of automating the indexing of media content in a simplified

hierarchical storage scheme and the automated assignment of keywords and other

metadata to the media content to facilitate its retrieval ([Column 1, Lines 5-10] of

Brechner).

Regarding claim 2, Brechner further discloses said assigning comprises:

extracting said meta-information from said context information (*as the content is*

being imported into database created by the Clip Organizer, it simultaneously indexed

the contents by adding keywords or metadata based upon contextual information,

[Column 6, Lines 6-11]).

Regarding claim 3, Brechner further discloses said obtaining of said user

provided information comprises:

receiving user input information being generated by user operation of any input

means of said mobile terminal device and/or

receiving transaction information and/or communication information being

received via any communication interface of said mobile terminal device (*accessing*

those media files can be done with computing devices in distributed computing

environments that include remote processing devices linked through a communication

network, [Column 4, Lines 29-32]),

wherein said user input information and/or transaction information and/or said

communication information represent said user provided information (*media files*

generated from digital cameras, web site image files, home video editing files, sound

files, and other types of user media content are stored on a hard drive, [Column 1, Lines 14-18]).

Regarding claim 4, <u>Brechner</u> further discloses said assigning of said meta-information to said user provided information comprises:

extracting labeling information and/or indexing information from said context information (*a user might store a digital photograph file "beach1 jpg" that was taken with an OLYMPUS^{TM} digital camera on the beach during a vacation to Hawaii in 1999 in a folder having a path such as "C:/My Documents/My Photo/Digital Camera/Olympus/Vacations+Hawaii1999Beach1.jpg." This path would be parsed by the Clip Organizer software to identify keywords for inclusion in the metadata for the file. These keywords would include: "My Documents," "My Photos," "Digital Camera," "Olympus," "Vacations," "Hawaii," and "1999."*, [Column 10, Lines 47-57]);

assigning said labeling information and/or indexing information to said user provided information (*as the content is being imported into database created by the Clip Organizer, it simultaneously indexed the contents by adding keywords or metadata based upon contextual information*, [Column 6, Lines 6-11]); and

storing said labeling information and/or indexing information and said user provided information (*content is being imported into a database created by the Clip Organizer, metadata based on contextual information is also added to enable a user to find the personal content at a later time using a keyword search*, [Column 6, Lines 6-11]);

wherein said labeling information and/or indexing information is employed as said

meta-information for establishing retrieval functionality of said user input history (*The*

user could also specifically identify digital photographs relating to beach scenes by

searching for metadata that include the word "beach" within the metadata associated

with each of the files included within the collection hierarchy stored in the user's content

database, [Column 11, Lines 11-23]).

Regarding claim 5, <u>Brechner</u> further discloses said associating said context

information with said user provided information comprises:

generating referencing information for at least a part of said user provided

information (*each collection in the database is associated a full path that indicates the*

location on the hard drive of the collection, [Column 9, Lines 53-55]);

storing said referencing information in a first storage area (*the original media file*

with full path address would serve as a reference in order to import that file into the

database created by Clip Organizer, [Column 9, Lines 48-59]); and

storing said part of said user provided information in a second storage area;

wherein said referencing information comprises address information which allow to

retrieve said part of user provided information from said second storage area (*Provision*

of this full path is important, because it sets up an import and indexing component and a

browse import component, [Column 9, Lines 55-65]).

Regarding claim 9, <u>Andrews</u> further discloses in case said first time information

relates to a first period of time: partitioning said user provided information into a plurality

information parts, each information part relates to a maximum pre-defined period of

time, each information part being matched separately (*the first lead time may define an*

alarm time six hours prior to the projected start time while a user is at home preparing

for the appointment. A second lead time may be a lunchtime reminder with a lead time

of two hours. A third lead time may be 15 minutes before the projected start time,

[0031]).

Regarding claim 12, <u>Andrews</u> further discloses each of said plurality of calendar

entries being included in said calendar information is semantically structured and said

obtaining of meta-information from each matching calendar entry (*Figure 5-6*)

comprises:

obtaining of meta-information from each of said matching semantically structured

calendar entry (*Once the alarm time is reached, processing continues to step 908*

where the current GPS location and the appropriate calendar information (i.e., the user's

current activity based on a calendar entry) are extracted, [0058]).

Regarding claim 13, <u>Brechner</u> further discloses:

obtaining said user provided information including user provided audio

information and in parallel additional user provided information, said user provided

audio information being recorded and stored (*media files generated from digital*

cameras, web site image files, home video editing files, sound files, and other types of

user media content are stored on a hard drive, [Column 1, Lines 14-18]);

obtaining said context information in parallel to said user provided audio

information, said context information comprising user input information generated in

consequence to user action against said mobile terminal device (*a user might store a*

digital photograph file "beach1 jpg" that was taken with an OLYMPUS^{TM} digital camera

on the beach during a vacation to Hawaii in 1999 in a folder having a path such as

"C:/My Documents/My Photo/Digital

Camera/Olympus/Vacations+Hawaii1999Beach1.jpg." This path would be parsed by the

Clip Organizer software to identify keywords for inclusion in the metadata for the file.

These keywords would include: "My Documents," "My Photos," "Digital Camera,"

"Olympus," "Vacations," "Hawaii," and "1999.", [Column 10, Lines 47-57]); and

generating meta-information comprising information about said additional user

provided information and said context information (*as the content is being imported into*

database created by the Clip Organizer, it simultaneously indexed the contents by

adding keywords or metadata based upon contextual information, [Column 6, Lines 6-

11]).

Regarding claim 17, <u>Brechner</u> further discloses said meta-information is

displayed by assigning graphical elements to each information entry included in said

meta-information and predicting said graphical elements illustrating the content of the

meta-information and showing associations defined in said meta-information (*Figure*

10).

Regarding claim 27, <u>Brechner</u> further discloses a method for retrieving user provided information being organized, comprising:

receiving a request for retrieving, said request comprising request information for instructing to retrieve certain user provided information (*If the user wants to search for keywords in the metadata associated with the media files, the user will enter the likely keywords in a text block 354*, [Column 15, Lines 37-44]);

comparing said request information with said meta-information being assigned to said user provided information which is provided by said information history functionality (*In this example, the user has entered the text "Vacation," indicating that any media file having that text string in its path and thus automatically included in the metadata for the file as a result of the automatic indexing of the media files will be located by the search*, [Column 15, Lines 37-44]);

retrieving said user provided information being assigned to said meta-information which matches said request information (*any media file that has the searched word "Vacation" in its metadata will be located by the search*, [Column 15, Lines 37-44]);

generating a response comprising said retrieved user provided information (*When the Search control is selected, a list of all media files meeting the desired criteria will be displayed to the user*, [Colum 15, Lines 53-55]); and

transmitting said response (*the search results are displayed on the monitor*, [Column 15, Lines 53-55] and Figure 1).

Regarding claim 28, <u>Brechner</u> further discloses said retrieving of said user provided information comprises:

retrieving referencing information being associated with said user provided information to be retrieved, said referencing information comprising address information which addresses said part of user provided information being stored in a second storage area (*a user might store a digital photograph file "beach1 jpg" that was taken with an OLYMPUS^{TM} digital camera on the beach during a vacation to Hawaii in 1999 in a folder having a path such as "C:/My Documents/My Photo/Digital Camera/Olympus/Vacations+Hawaii1999Beach1.jpg." This path would be parsed by the Clip Organizer software to identify keywords for inclusion in the metadata for the file. These keywords would include: "My Documents," "My Photos," "Digital Camera," "Olympus," "Vacations," "Hawaii," and "1999."*, [Column 10, Lines 47-57]); and

retrieving said part of user provided information from said second storage area (*The user could also specifically identify digital photographs relating to beach scenes by searching for metadata that include the word "beach" within the metadata associated with each of the files included within the collection hierarchy stored in the user's content database*, [Column 11, Lines 11-23]).

Regarding claim 29, <u>Andrews</u> further discloses, wherein said retrieving of said user provided information comprises:

evaluating said user provided information being retrieved on the basis of said membership grade values obtained from calendar entries, said membership grade value

defining a measure which allows to estimate a reliability for retrieval (*The particular*

appointment is identified in the appointment column 602A. The entries of the lead time

column 602B are populated using the alarm lead time column 502B of the history data

structure 315. Each entry of a projected lead time column 602C provides a lead time to

be used for the next appointment. The projected lead time is calculated using a time

difference value contained in the entries of a time difference column 602D, [0044]).

Regarding claim 30, <u>Brechner</u> clearly shows and discloses a method for

providing storage capacity for organizing user provided information being provided with

meta-information (*Abstract*), comprising:

receiving a request to store at least a part of said user provided information

(*Figure 11 shows an interface to organize selected media clips on command. This*

interface could be displayed on hand-held devices, pocket personal computing devices,

[Column 4, Lines 23-29]), wherein said request comprises said part of said user

provided information and referencing information (*Figure 11, #324 & #326*);

storing said part of said user provided information and said referencing

information such that said part of said user provided information is retrievable in

conjunction with said referencing information (*a user might store a digital photograph file*

"beach1 jpg" that was taken with an OLYMPUS^{TM} digital camera on the beach during a

vacation to Hawaii in 1999 in a folder having a path such as "C:/My Documents/My

Photo/Digital Camera / Olympus / Vacations+Hawaii1999Beach1.jpg." This path would

be parsed by the Clip Organizer software to identify keywords for inclusion in the

metadata for the file. These keywords would include: "My Documents," "My Photos,"

"Digital Camera," "Olympus," "Vacations," "Hawaii," and "1999.", [Column 10, Lines 47-

57]).

receiving a request for retrieving at least said part of said user provided

information wherein said request comprises referencing information (*If the user wants to*

search for keywords in the metadata associated with the media files, the user will enter

the likely keywords in a text block 354, [Column 15, Lines 37-44]);

retrieving said part of said user provided information in accordance with said

referencing information (*In this example, the user has entered the text "Vacation,"*

indicating that any media file having that text string in its path and thus automatically

included in the metadata for the file as a result of the automatic indexing of the media

files will be located by the search, [Column 15, Lines 37-44]); and

generating a response including said retrieved part of said user provided

information (*When the Search control is selected, a list of all media files meeting the*

desired criteria will be displayed to the user, [Colum 15, Lines 53-55]).

Regarding claim 31, <u>Brechner</u> clearly shows and discloses a computer readable

storage medium embedded with a computer program comprising programming code for

carrying out the operations of claim 1 ([Column 4, Lines 12-17]).

Regarding claim 35, <u>Andrews</u> clearly shows and discloses an apparatus (*Figure*

3) comprising:

a component obtaining user provided information (*A user of the wireless device*

102 schedules an appointment at a site located inside the building 104 at some time in

the future. The user then enters the appointment location, e.g., the location of the

building 104, and the appointment time into the wireless device 102, [0022]) and context

information associated with said user provided information, in consequence to any user

operation against said apparatus, wherein said context information is related to at least

one current condition of the mobile terminal device at the time of said any user

operation and includes calendar information from an electronic calendar implemented at

said mobile terminal device (*the current location of the user is obtained from a position*

detector, e.g., a global positioning system (GPS), in the wireless device 102 or a device

coupled to the wireless device 102. Using the current location, the appointment location

and the path 106, and an estimated travel time can be calculated, [0023]);

a component for obtaining a first time information in accordance with said user

provided information (*the method 400 starts at step 402 and proceeds to step 404*

where a current time is retrieved from the support circuits 318, e.g., a clock, and the

current location of the wireless device 102 is retrieved from the position detector 306. At

step 406, the method 400 processes each appointment stored in the memory 304 of the

wireless device 304, [0048]);

a component for obtaining one or more calendar entries includes in said calendar

information, wherein each calendar entry comprises a second time information with a

start time and an end time (*data collection table 315C is a table organized as a series of*

columns and rows. Each row defines a record for a particular appointment. The columns

include an appointment column 502A, an alarm lead time column 502B, a calendar

event column 502C, a GPS departure location column 502D, a GPS arrival location

502E, an arrival time column 502F and a stress factor column 502G. Each entry under

the appointment column 502A contains an appointment number by which the particular

appointment for that record can be identified, [0042]);

a component for matching said first time information and each of said second

time information by assigning a membership function to said second time information,

wherein said membership function is a function in time, which rises from zero value at a

predetermined moment in time before said start time of each calendar entry, and

becomes zero value at a predefined moment in time after said end time of each

calendar entry (*the wireless device 102 is configured to notify the user of the*

appointment. To perform this notification, the wireless device 102 determines or projects

an "alarm time". The projected alarm time is a prediction of when the user of the

wireless device 102 needs to start preparing for the appointment in order to timely arrive

for the appointment using a common form of transportation, e.g., an automobile, a

plane, a train, a bus, and the like. The notification is provided if the projected start time

is reached or exceeded, i.e., when the current time reaches or exceeds the projected

alarm time, [0024]. *The reminder alarm is a preset alarm that reminds the user of the*

appointment. Different formats of the reminder alarm exist. For example, the reminder

alarm may comprise a one-time alarm or a periodic alarm, [0056]), and derives a

membership grade value from said membership function in accordance with said first

time information, and said membership grade value defining a measure which allows to

estimate a reliability for retrieval (*The particular appointment is identified in the appointment column 602A. The entries of the lead time column 602B are populated using the alarm lead time column 502B of the history data structure 315. Each entry of a projected lead time column 602C provides a lead time to be used for the next appointment. The projected lead time is calculated using a time difference value contained in the entries of a time difference column 602D*, [0044]); and

a component for obtaining meta-information from each matching calendar entry of said one or more obtained calendar entries.(*Once the alarm time is reached, processing continues to step 908 where the current GPS location and the appropriate calendar information (i.e., the user's current activity based on a calendar entry) are extracted*, [0058]);

a component for assigning meta-information obtained from said context information and said membership grade value to said user provided information (*the data collection table 315C is a table organized as a series of columns and rows. Each row defines a record for a particular appointment. The columns include an appointment column 502A, an alarm lead time column 502B, a calendar event column 502C, a GPS departure location column 502D, a GPS arrival location 502E, an arrival time column 502F and a stress factor column 502G. Each entry under the appointment column 502A contains an appointment number by which the particular appointment for that record can be identified*, [0042]);

a storage component for storing said user provided information and said meta-information in a history storage in order to establish an information history functionality

(*Referring now to Figure 7, a summary view 315B of the history data is shown. In this view, the history data contained in the history data structure 315 has been sorted into two columns 702 and 704. Lead times and current GPS locations are contained in the history data structure among with other attributes*, [0047]).

Brechner discloses:

wherein said meta-information is employable for retrieval of said user provided information by matching request information of a retrieval request with said meta-information for selecting a user provided information assigned to said meta-information matched to said request information (*the user could also specifically identify digital photographs relating to beach scenes by searching for metadata that include the word "beach" within the meta data associated with each of the files included within the collection hierarchy stored in the user's content database*, [Column 11, Lines 11-23]).

It would have been obvious to an ordinary person skilled in the art at the time of the invention was made to incorporate the teachings of Brechner with the teachings of Andrews for the purpose of automating the indexing of media content in a simplified hierarchical storage scheme and the automated assignment of keywords and other metadata to the media content to facilitate its retrieval ([Column 1, Lines 5-10] of Brechner).

Regarding claim 37, Brechner further discloses:

a component (*Figure 1*) for obtaining user provided audio information and additional user provided information (*a user might store a digital photograph file "beach1*

jpg" that was taken with an OLYMPUS^{TM} digital camera on the beach during a vacation to Hawaii in 1999 in a folder having a path such as "C:/My Documents/My Photo/Digital Camera/Olympus/Vacations+Hawaii1999Beach1.jpg." This path would be parsed by the Clip Organizer software to identify keywords for inclusion in the metadata for the file. These keywords would include: "My Documents," "My Photos," "Digital Camera," "Olympus," "Vacations," "Hawaii," and "1999.", [Column 10, Lines 47-57]);

a component (*Figure 1*) for recording said user provided audio information (*before the sound/media files were stored on a computer's hard drive, it is inherent that the files had been recorded/downloaded/transferred from other sources,* [Column 1, Lines 13-16]);

a storage component for storing said user provided audio information (*hard drive,* [Column 1, Lines 13-16]);

a component (*Figure 1*) for obtaining context information in parallel to said user provided audio information, said context information comprising user input information generated in consequence on a user action against said mobile terminal device (*a user might store a digital photograph file "beach1 jpg" that was taken with an OLYMPUS^{TM} digital camera on the beach during a vacation to Hawaii in 1999 in a folder having a path such as "C:/My Documents/My Photo/Digital Camera/Olympus/Vacations+Hawaii1999Beach1.jpg." This path would be parsed by the Clip Organizer software to identify keywords for inclusion in the metadata for the file.*

These keywords would include: "My Documents," "My Photos," "Digital Camera,"

"Olympus," "Vacations," "Hawaii," and "1999.", [Column 10, Lines 47-57]); and

a component (*Figure 1*) for generating meta-information comprising information

about said additional user provided information and said context information (*as the*

content is being imported into database created by the Clip Organizer, it simultaneously

indexed the contents by adding keywords or metadata based upon contextual

information, [Column 6, Lines 6-11]).

14.   Claims 10, and 15-16 are rejected under 35 U.S.C. 103(a) as being

unpatentable over <u>Andrews et al.</u> (*Pub. No. US 2003/0060979, filed on September 21,*

2001; hereinafter <u>Andrews</u>) in view of <u>Brechner et al.</u> (*Pat. No. US 6,741,996, filed on*

April 18, 2001; hereinafter <u>Brechner</u>), and further in view of <u>Gupta et al.</u> (*Pat. No. US*

6,484,156, filed on September 15, 1999; hereinafter <u>Gupta</u>).

Regarding claim 10, <u>Andrews</u>, as modified by <u>Brechner</u>, does not disclose in

case said first time information relates to a first period of time and said second time

information relates to a second period of time; and in case said first period of time

exceeds said second period of time: sectioning said user provided information into at

least two information sections, one of said at least two information sections fitting with

said second period of time, said one fitting information section being matched.

However, <u>Gupta</u> discloses in case said first time information relates to a first

period of time and said second time information relates to a second period of time; and

in case said first period of time exceeds said second period of time (*Figure 10 shows a*

target file is being divided into multiple segments, each segment has a corresponding

play time, [Column 8, Lines 10-23]):

sectioning said user provided information into at least two information sections,

one of said at least two information sections fitting with said second period of time, said

one fitting information section being matched (*Figure 10 shows if the search time from*

000:04:08.262 to 000:11:00.14 matches a segment, that segment will be retrieved when

the 'Play' button is pressed. See further Figure 4 for all searchable fields in an

annotation entry).

It would have been obvious to a person with ordinary skills in the art at the time

of the invention was made to incorporate the teachings of Gupta with the teachings of

Andrews, as modified by Brechner, for the purpose of providing easy access to different

multimedia streams by using a group identifier to identify all of the multimedia streams

and their corresponding annotations ([Column 2, Lines 34-46] of Gupta).

Regarding claim 15, Gupta further discloses a recording context information at

least including:

information and time information about said user provided audio information

(*Figure 4, see Time Range #184*);

time information about said user input information *Figure 4, see Creation Time*

#188); and

information about said additional user provided information being associated with

the user provided audio information (*Figure 5 shows the annotation entry used to

associate with the media*).

Regarding claim 16, <u>Gupta</u> further discloses said generating of said recording

context information comprises:

encoding said meta-information as a document being encoded in accordance

with a markup language (*communication between client 15 and server 10 is performed

via HTTP, using commands encoded as Uniform Resource Locators (URLs) and data

formatted as object linking and embedding (OLE) structured storage documents, or

alternatively using Extensible Markup Language (XML)*, [Column 6, Lines 9-15]).

15.   Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over

<u>Andrews et al.</u> (*Pub. No. US 2003/0060979, filed on September 21, 2001; hereinafter

<u>Andrews</u>*) in view of <u>Brechner et al.</u> (*Pat. No. US 6,741,996, filed on April 18, 2001;

hereinafter <u>Brechner</u>*), and further in view of <u>Asazu</u> (*Pub. No. 2001/0049691, published

on December 6, 2001*).

Regarding claim 14, <u>Andrews</u>, as modified by <u>Brechner</u>, further discloses said

user input information comprises control signals related to said recording of said user

provided audio information, further comprises:

on receiving a keyword signal: initiating a recording of a user provided audio

keyword information including keywords relating to said user provided audio information

(*the file suffix is added as a keyword in the metadata for the file in a block 180. The*

suffix is the media file extension, such as "wav" for audio files in the wave format,

[Column 10, Lines 32-44] of <u>Brechner</u>);

<u>Asazu</u> discloses:

on receiving a start signal: initiating said recording and storing of said user

provided audio information (*The following processing is executed in response to the*

query #2. Firstly, the QT plug-in component 14 calls a function of start ( ) to the recorder

25 to issue an instruction to start recording of media data. Subsequently, the recorder

25 notifies the logger 24 of the instruction to start recording of media data, [0068]);

on receiving an attach signal: associating additional information with said user

provided audio information (*In this case, the recorder 25 calls a function of notify ( ) to*

the recording manager 26 whenever each frame is processed. The recording manager

26 activates the DA plug-in component 15 registered by the system in advance per

frame data. Each DA plug-in component 15 executes an analysis of frame data to

create meta-data, [0068]);

on receiving a pause signal: pausing said recording and storing of said user

provided audio information (*The following processing is executed in response to the*

query #3. The QT plug-in component 14 calls a function of stop ( ) to the recorder 25 to

issue an instruction to stop recording of media data. The recorder 25 stops recording of

media data, while notifying the logger 25 that recording of media data is stopped,

[0069]);

on receiving a continue signal: resuming said recording and storing of said user

provided audio information subsequently to said pausing of said recording and storing

(*the processing for acquiring the information relating to meta-data is interrupted for the*

duration of the above access until the end of the other transaction. Thereafter, the QT

plug-in component 14 resumes the processing to acquire the information relating to the

required meta-data, [0078]. It is also very well-known in the art that resuming a paused

recording part would start at the pausing point like in a digital voice recorder); and

on receiving a stop signal: stopping said recording and storing of said user

provided audio information and generating said recording context information (*The QT*

plug-in component 14 calls a function of commit ( ) to the recorder 25, resulting in

completion of recording of media data. It is to be understood that calling a function of

abort ( ) instead of the function of commit ( ) aborts all the media data and meta-data

recorded or created in this session after calling of the function of start ( ), and the

system is restored to its original state, [0069]).

It would have been obvious to a person with ordinary skills in the art at the time

of the invention was made to incorporate the teachings of Asazu with the teachings of

Andrews, as modified by Brechner, for the purpose of providing media data

management functions including replaying, readout, recording, deletion and synthesis of

media data by the use of meta-data ([0013] and Abstract of Asazu).

16.   Claims 18, 23, 32, and 38 are rejected under 35 U.S.C. 103(a) as being

unpatentable Andrews et al. (*Pub. No. US 2003/0060979, filed on September 21, 2001;*

hereinafter Andrews) in view of Tecu et al. (*Pub. No. US 2004/0034655, filed on July*

17, 2002; hereinafter Tecu), and further in view of Oxford (*Pat. No. US 6,212,199,*

published on April 3, 2001).

Regarding claim 18, Andrews clearly shows and discloses a method ([Abstract])

comprising:

obtaining user provided information in consequence to any user operation on a

mobile terminal device (*A user of the wireless device 102 schedules an appointment at*

a site located inside the building 104 at some time in the future. The user then enters

the appointment location, e.g., the location of the building 104, and the appointment

time into the wireless device 102, [0022]), wherein said user provided information

includes user provided audio information (*The input device 322 may comprise any*

device utilized to provide input to the wireless device 102. Examples of the input device

322 include a keypad, a microphone, a touch screen, a light pen, and the like, [0040]);

obtaining context information associated with said user provided information,

wherein said context information is related to at least one current condition of the mobile

terminal device at the time of said any user operation (*the current location of the user is*

obtained from a position detector, e.g., a global positioning system (GPS), in the

wireless device 102 or a device coupled to the wireless device 102. Using the current

location, the appointment location and the path 106, and an estimated travel time can

be calculated, [0023]);

storing said user provided information with mapped meta-information in a history

storage in order to establish an information history functionality (*Referring now to Figure*

7, a summary view 315B of the history data is shown. In this view, the history data

contained in the history data structure 315 has been sorted into two columns 702 and

704. Lead times and current GPS locations are contained in the history data structure

among with other attributes, [0047]).

wherein said meta-information is employable for retrieval of said user provided

information by matching request information of a retrieval request with said meta-

information for selecting a user provided information assigned to said meta-information

matched to said request information (*the automatic call is placed contemporaneously*

with or after the past due alarm at step 416 when the user is running late. A

determination that the user is running late may be made by determining whether the

user can reach the appointment location before the schedule appointment time based

on the user's current location, [0061]).

Tecu then discloses:

providing a set of code bases representing a plurality of coding symbols

(*frequency data 60 in Figure 1*), each code base of said set of code bases comprising a

pre-defined number of pre-defined frequencies (*At step 114, encoder routine 26 selects*

the frequencies 62 for encoding metadata 40. For example, encoder routine 26 may

access frequency data 60 to acquire one or more default frequencies 62 for encoding

metadata 40. Frequency data 60 may also comprise one or more frequencies 62

selected by a user of system 10 for encoding metadata 40, [0027]), wherein plurality of

coding symbols represents a character and symbol code table for said meta-information

(*database 30 also comprises intensity data 70 having information associated with*

encoded metadata 40. For example, in the illustrated embodiment, intensity data 70

comprises signal amplitude or intensity levels 72 used to encode metadata 40 such that

various intensity levels 72 may be used to designate a particular bit pattern of

information, [0017]), wherein said set of code bases is defined within a first frequency

range (*frequency data 60 in Figure 1, range is 20kHz or greater to render inaudible to*

human hearing, [0019]), wherein said first frequency range is one frequency range of a

plurality of frequency ranges forming a total frequency range being applicable to said

user provided audio information (*encoder routine 26 may encode metadata 40 at a*

frequency 62 generally inaudible or imperceptible to human hearing such that the

encoded metadata 40 does not detrimentally affect audio data 34 audible to human

hearing, [0019]);

mapping said meta-information in accordance with said plurality of coding

symbols into said first frequency range and said at least one further frequency range to

obtain redundancy (*At step 116, encoder routine 26 designates metadata 40 to be*

encoded at each of the selected frequencies 62. For example, each type of metadata 40

to be included in the particular data stream 32 may be encoded at each of a plurality of

designated frequencies 62, [0028]. *Encoder routine 26 may encode metadata 40 by generating a bit pattern at one or more desired inaudible frequencies 62,* [0022]); and

combining said user provided audio information and said mapped meta-information by embedding said mapped meta-information into said user provided audio information (*encoder routine 26 may also populate initial portions of audio data 34 with information identifying the encoding frequencies 62, intensity levels 72,* [0029]).

It would have been obvious to a person with ordinary skills in the art at the time of the invention was made to incorporate the teachings of Tecu with the teachings of Andrews for the purpose of encoding metadata at a plurality of predetermined intensity levels at a human-inaudible frequency and populating the audio data of the data stream with the encoded metadata using an encoder routine accessible by the processor ([0003] of Tecu).

Andrews, as modified by Tecu, does not disclose mapping said set of code bases into at least one further frequency range out of said plurality of frequency ranges.

However, Oxford discloses mapping said set of code bases into at least one further frequency range out of said plurality of frequency ranges (*the sample frequency coding may comprise : code 00 representing a frequency of 44.1 kHz; code 01 representing a frequency of 48.0 kHz; code 10 representing a frequency of 32.0 kHz; and code 11 representing an unspecified or out-of-range frequency. That is, if the incoming bit stream is not one of the standard sample rates, this field is set to 11,* [Column 9, Lines 20-31]).

It would have been obvious to a person with ordinary skills in the art at the time of the invention was made to incorporate the teachings of Oxford with the teachings of Andrews, as modified by Tecu, for the purpose of processing digital audio data comprises remapping channel status information in an input digital audio bit stream into a uniform format ([Abstract] of Oxford).

Regarding claim 23, Tecu further discloses a method for extracting meta-information from an audio information having embedded said meta-information, said method comprising:

providing a correlation basis comprising each frequency being included in a set of code bases representing a plurality of coding symbols (*Figure 1, frequency data 60*), said coding symbols being employed for coding said meta-information (*relational data 50 may be generated after decoding of metadata 40 by decoder routine 28, or relational data 50 may be generated upon encoding or insertion of metadata 40 into a particular data stream 32*, [0021]); and

applying said correlation basis onto said user provided audio information having embedded said meta-information to extract said meta-information (*Processor 16 also generates relational data 50 corresponding to the encoded metadata 40 such that metadata 40 may be correlated to particular data streams 32*, [0021]);

wherein said extracted meta-information being available for retrieval (*search engine 20 may be used to quickly and efficiently locate a particular data stream 32 using search parameters corresponding to metadata 4*, [0021]).

Regarding claim 32, <u>Andrews</u> clearly shows and discloses a computer readable

storage medium embedded with a computer program comprising programming code for

carrying out the operations of claim 18 (*Figure 3*).

Regarding claim 38, <u>Andrews</u> clearly shows and discloses an apparatus (*Figure*

3) comprising:

a component for obtaining user provided information and context information

associated with said user provided information, in consequence to any user operation

on a mobile terminal device (*A user of the wireless device 102 schedules an*

appointment at a site located inside the building 104 at some time in the future. The

user then enters the appointment location, e.g., the location of the building 104, and the

appointment time into the wireless device 102, [0022]), wherein said context information

is related to at least one current condition of the mobile terminal device at the time of

said any user operation (*the current location of the user is obtained from a position*

detector, e.g., a global positioning system (GPS), in the wireless device 102 or a device

coupled to the wireless device 102. Using the current location, the appointment location

and the path 106, and an estimated travel time can be calculated, [0023]), wherein said

user provided information includes user provided audio information (*The input device*

322 may comprise any device utilized to provide input to the wireless device 102.

Examples of the input device 322 include a keypad, a microphone, a touch screen, a

light pen, and the like, [0040]);

a storage component for storing said user provided information with mapped

meta-information in a history storage in order to establish an information history

functionality (*Referring now to Figure 7, a summary view 315B of the history data is*

shown. In this view, the history data contained in the history data structure 315 has

been sorted into two columns 702 and 704. Lead times and current GPS locations are

contained in the history data structure among with other attributes, [0047]).

wherein said meta-information is employable for retrieval of said user provided

information by matching request information of a retrieval request with said meta-

information for selecting a user provided information assigned to said meta-information

matched to said request information (*the automatic call is placed contemporaneously*

with or after the past due alarm at step 416 when the user is running late. A

determination that the user is running late may be made by determining whether the

user can reach the appointment location before the schedule appointment time based

on the user's current location, [0061]).

Tecu then discloses:

a set of code bases representing a plurality of coding symbols (*frequency data 60*

in Figure 1), each code base of said set of code bases comprising a pre-defined number

of pre-defined frequencies (*At step 114, encoder routine 26 selects the frequencies 62*

for encoding metadata 40. For example, encoder routine 26 may access frequency data

60 to acquire one or more default frequencies 62 for encoding metadata 40. Frequency

data 60 may also comprise one or more frequencies 62 selected by a user of system 10

for encoding metadata 40, [0027]), wherein said of code bases is defined within a first

frequency range, wherein said first frequency range is one frequency range of a plurality

of frequency ranges forming a total frequency range within the frequency range of said

user provided audio information (*encoder routine 26 may encode metadata 40 at a*

frequency 62 generally inaudible or imperceptible to human hearing such that the

encoded metadata 40 does not detrimentally affect audio data 34 audible to human

hearing, [0019]);

a component for mapping said meta-information in accordance with said plurality

of coding symbols into said first frequency range and said at least one further frequency

range (*At step 116, encoder routine 26 designates metadata 40 to be encoded at each*

of the selected frequencies 62. For example, each type of metadata 40 to be included in

the particular data stream 32 may be encoded at each of a plurality of designated

frequencies 62, [0028]. *Encoder routine 26 may encode metadata 40 by generating a bit*

pattern at one or more desired inaudible frequencies 62, [0022]); and

a component for obtaining user provided audio information having embedded

said meta-information by embedding said mapped meta-information into said user

provided audio information (*encoder routine 26 may also populate initial portions of*

audio data 34 with information identifying the encoding frequencies 62, intensity levels

72, [0029]).

It would have been obvious to a person with ordinary skills in the art at the time

of the invention was made to incorporate the teachings of <u>Tecu</u> with the teachings of

Andrews for the purpose of encoding metadata at a plurality of predetermined intensity

levels at a human-inaudible frequency and populating the audio data of the data stream

with the encoded metadata using an encoder routine accessible by the processor

([0003] of Tecu).

Andrews, as modified by Tecu, does not disclose mapping said set of code

bases into at least one further frequency range out of said plurality of frequency ranges.

However, Oxford discloses mapping said set of code bases into at least one

further frequency range out of said plurality of frequency ranges (*the sample frequency*

coding may comprise : code 00 representing a frequency of 44.1 kHz; code 01

representing a frequency of 48.0 kHz; code 10 representing a frequency of 32.0 kHz;

and code 11 representing an unspecified or out-of-range frequency. That is, if the

incoming bit stream is not one of the standard sample rates, this field is set to 11,

[Column 9, Lines 20-31]).

It would have been obvious to a person with ordinary skills in the art at the time

of the invention was made to incorporate the teachings of Oxford with the teachings of

Andrews, as modified by Tecu, for the purpose of processing digital audio data

comprises remapping channel status information in an input digital audio bit stream into

a uniform format ([Abstract] of Oxford).

17.   Claims 19, 21-22, 24, and 26 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Andrews et al. (*Pub. No. US 2003/0060979, filed on September 21,*

2001; hereinafter Andrews) in view of Tecu et al. (*Pub. No. US 2004/0034655, filed on*

July 17, 2002; hereinafter <u>Tecu</u>*), and further in view of* <u>Oxford</u> (*Pat. No. US 6,212,199,*

published on April 3, 2001)*, and further in view of* <u>Tsuruoka</u> (*Pat. No. US 6,192,056,*

published on February 20, 2001).

Regarding claim 19, <u>Andrews</u>, as modified by <u>Tecu</u> and <u>Oxford</u>, discloses said

combining comprises:

obtaining a modulation signal from said mapped meta-information (*intensity data*

70 having information associated with encoded metadata 40. For example, in the

illustrated embodiment, intensity data 70 comprises signal amplitude or intensity levels

72 used to encode metadata 40 such that various intensity levels 72 may be used to

designate a particular bit pattern of information, [0017] of <u>Tecu</u>).

<u>Andrews</u>, as modified by <u>Tecu</u> and <u>Oxford</u>, does not disclose the other

limitations.

<u>Tsuruoka</u> discloses:

obtaining a modulated signal by combining said user provided audio information

and said modulation signal in a frequency domain (*a modulated signal using a*

multiplicity of carriers whose frequency components are in an orthogonal relationship

with one another, encodes data such as audio data or the like, and the encoded data

are allocated to each carrier, thereby modulating each carrier, a digital signal in the

frequency domain comprised of each modulated carrier is inverse fast Fourier

transformed into a digital signal in a time domain, [Column 1, Lines 23-31]); and

obtaining said user provided audio information having embedded said meta-information by combining said modulated signal with said user provided audio information in a time domain (*On its demodulating side, by A/D converting such an OFDM modulated signal and then applying the fast Fourier transform to the A/D converted signal, the encoded data allocated to each carrier is obtained*, [Column 1, Lines 28-31]).

It would have been obvious to a person with ordinary skills in the art at the time of the invention was made to incorporate the teachings of Tsuruoka with the teachings of Andrews, as modified by Tecu and Oxford, for the purpose of demodulating a digital orthogonal frequency division multiplex modulated signal in which an information signal modulates a plurality of carriers whose frequency components are in an orthogonal relationship with one another using OFDM (Orthogonal Frequency Division Multiplex) modulation ([Column 1, Lines 14-22] of Tsuruoka).

Regarding claim 21, Tsuruoka further discloses said obtaining of said modulated signal comprises:

obtaining said modulated signal by multiplying said user provided audio information and said modulation signal in said frequency domain (*a modulated signal using a multiplicity of carriers whose frequency components are in an orthogonal relationship with one another, encodes data such as audio data or the like, and the encoded data are allocated to each carrier, thereby modulating each carrier, a digital*

signal in the frequency domain comprised of each modulated carrier is inverse fast

Fourier transformed into a digital signal in a time domain, [Column 1, Lines 23-31]).

Regarding claim 22, <u>Tsuruoka</u> further discloses:

obtaining said user provided audio information having embedded said meta-

information by adding said modulation signal and said user provided audio information

in said time domain (*On its demodulating side, by A/D converting such an OFDM*

modulated signal and then applying the fast Fourier transform to the A/D converted

signal, the encoded data allocated to each carrier is obtained, [Column 1, Lines 28-31]).

Regarding claim 24, <u>Andrews</u>, as modified by <u>Tecu</u> and <u>Oxford</u>, discloses said

applying comprises:

obtaining a modulation signal from said correlation basis (*intensity data 70*

having information associated with encoded metadata 40. For example, in the illustrated

embodiment, intensity data 70 comprises signal amplitude or intensity levels 72 used to

encode metadata 40 such that various intensity levels 72 may be used to designate a

particular bit pattern of information, [0017] of <u>Tecu</u>);

extracting magnitude signal values from said correlation signal (*intensity data 70*

comprises signal amplitude or intensity levels 72 used to encode metadata 40 such that

various intensity levels 72 may be used to designate a particular bit pattern of

information, [0017] of <u>Tecu</u>), said magnitude signal values corresponding to each code

basis of said set of code bases (*encode metadata at a plurality of predetermined*

intensity levels at a human-inaudible frequency and populate the audio data of the data

stream with the encoded metadata, [0003] of <u>Tecu</u>); and

evaluating said magnitude signal values to retrieve said meta-information from

said user provided audio information (*various intensity ranges 74 may also be used to*

designate a particular bit pattern of information. For example, a particular range of

signal level strengths may be used to identify a bit designation of "1" while another

range of signal level strengths may be used to identify a bit designation of "0", [0017] of

<u>Tecu</u>).

<u>Tsuruoka</u> discloses:

obtaining a correlation signal from said user provided audio information by

convoluting said modulation signal and said user provided audio information having

embedded said meta-information in a frequency domain (*a modulated signal using a*

multiplicity of carriers whose frequency components are in an orthogonal relationship

with one another, encodes data such as audio data or the like, and the encoded data

are allocated to each carrier, thereby modulating each carrier, a digital signal in the

frequency domain comprised of each modulated carrier is inverse fast Fourier

transformed into a digital signal in a time domain, [Column 1, Lines 23-31]).

Regarding claim 26, <u>Andrews</u>, as modified by <u>Tecu</u> and <u>Oxford</u>, discloses said

correlation basis being defined in a first frequency range (*frequency data 60 in Figure 1,*

range is 20kHz or greater to render inaudible to human hearing, [0019] of <u>Tecu</u>) and

said obtaining of said correlation signal comprises :

providing a correlation basis comprising all frequencies of said set of code bases

within a first frequency range of a plurality of frequency ranges (*frequency data 60 in*

Figure 1, range is 20kHz or greater to render inaudible to human hearing, [0019] of

Tecu);

mapping said correlation basis into each frequency range of a plurality of

frequency ranges, said plurality of frequency ranges forming a total frequency range

being applicable to said user provided audio information to obtain said modulation

signal (*Processor 16 also generates relational data 50 corresponding to the encoded*

metadata 40 such that metadata 40 may be correlated to particular data streams 32,

[0021] of Tecu); and

Tsuruoka discloses:

obtaining said correlation signal from said user provided audio information by

convoluting said modulation signal and said user provided audio information in said

frequency domain (*a modulated signal using a multiplicity of carriers whose frequency*

components are in an orthogonal relationship with one another, encodes data such as

audio data or the like, and the encoded data are allocated to each carrier, thereby

modulating each carrier, a digital signal in the frequency domain comprised of each

modulated carrier is inverse fast Fourier transformed into a digital signal in a time

domain, [Column 1, Lines 23-31]).

18.   Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Andrews et al. (*Pub. No. US 2003/0060979, filed on September 21, 2001; hereinafter*

Andrews) in view of Tecu et al. (*Pub. No. US 2004/0034655, filed on July 17, 2002;*

hereinafter Tecu), and further in view of Oxford (*Pat. No. US 6,212,199, published on*

April 3, 2001), and further in view of Tsuruoka (*Pat. No. US 6,192,056, published on*

February 20, 2001), and further in view of Levy et al. (*Pub. No. US 2002/0031240, filed*

on December 6, 2000; hereinafter Levy).

Regarding claim 25, Andrews, as modified by Tecu, Oxford, and Tsuruoka,

discloses extracting metadata using a magnitude value (*various intensity ranges 74 may*

also be used to designate a particular bit pattern of information. For example, a

particular range of signal level strengths may be used to identify a bit designation of "1"

while another range of signal level strengths may be used to identify a bit designation of

"0", [0017] of Tecu).

Andrews, as modified by Tecu, Oxford, and Tsuruoka, does not disclose the first

two limitations.

However, Levy discloses:

obtaining magnitude ratio values of each pair of said magnitude signal values

(*For each of the M selected coefficients, x, the embedder computes a ratio of the*

magnitude of a selected coefficient relative to the magnitude of its neighbors (108). In

particular, it is a ratio of the magnitude of the selected coefficient to the average

magnitude of the surrounding neighbors, [0013]);

normalizing said magnitude ratio values (*The embedding and detecting*

operations apply to other media types, including audio media signals. In addition, the

frequency domain coefficients may be selected and adjusted to reference values to

detect other types of signal alteration, such as lossy compression, digital to analog and

analog to digital conversion, downsampling and upsampling, etc, [0031]); and

It would have been obvious to a person with ordinary skills in the art at the time

of the invention was made to incorporate the teachings of Levy with the teachings of

Andrews, as modified by Tecu, Oxford, and Tsuruoka, for the purpose of detecting and

analyzing alteration of a watermarked media signal that contains data information by

examining signal peaks at selected frequency coefficients in the media signal ([0008] of

Levy).

Conclusion

19.   These following prior arts made of record and not relied upon are considered

pertinent to Applicant's disclosure:

Kohut et al. (Pub. No. US 2003/0187820) teaches media management system

and process.

Stubler et al. (Pub. No. US 2002/0188602) teaches method for associating

semantic information with multiple images in an image database environment.

Eyal et al. (Pub. No. US 2004/0177096) teaches streaming media search

system.

The Examiner requests, in response to this Office action, support(s) must be

shown for language added to any original claims on amendment and any new claims.

That is, indicate support for newly added claim language by specifically pointing to

page(s) and line no(s) in the specification and/or drawing figure(s). This will assist the

Examiner in prosecuting the application.

When responding to this office action, Applicant is advised to clearly point out the

patentable novelty which he or she thinks the claims present, in view of the state of the

art disclosed by the references cited or the objections made. He or she must also show

how the amendments avoid such references or objections See 37 CFR 1.111(c).

Contact Information

20.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Son T. Hoang whose telephone number is (571) 270-

1752. The Examiner can normally be reached on Monday - Friday (7:30 AM – 4:00 PM).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's

supervisor, Christian Chace can be reached on (571) 272-4190. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative or access to the automated information system, call

800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S.T.H/
Examiner, Art Unit 2165
February 25, 2009

/Neveen Abel-Jalil/
Primary Examiner, Art Unit 2165